

REMARKS/ARGUMENTS

A. Amendment to the Claims

Claims 1, 45, 50, 51, 60, 62, 64, 77 and 78 are amended. Claims 4-44, 46-47, 49, 52, 55-59, 63 and 65-76 are canceled. New claims 79-83 are added. Claims 1-3, 45, 48, 50, 51, 53, 54, 60-62, 64, and 77-83 are now under examination

Independent claims 1 and 60 are further amended to provide that the change tool has a blade portion having the upper edge that intersects all of the retainer cavities when the change tool is inserted within the change tool slot, and that the upper edge (claim 1) / linear upper edge (claim 60) of the change tool raises all of the plurality of change balls disposed in all of the corresponding retainer cavities to a position where, upon subsequent rotation of the plug away from the second rotated position, all of the raised change ball are isolated in the corresponding driver chamber. Support for the amendments is found in paragraphs [0141] and [0191], and in Figures 11A and 11B.

Independent claims 1 and 60 are also amended to provide that the lock has only one change tool.

Claim 45 and 62 are amended, respectively, to reword and define the invention as claimed, as the lock being operable with a user key only when the change tool is remote from the change tool slot.

Claim 50 is amended to provide that the programming key raises all of the change balls above the shear line. Support is provided in para. [0174].

Claim 51 and 64 are amended, respectively, to define the invention by deleting a portion of the claim unnecessary for patentability.

Claims 77 and 78 are amended to include antecedent basis. Support is found in claims 1 and 60, respectively.

New claims 79 and 80 depend from claims 1 and 60, respectively, and provide that the number of the plurality of drivers and the plurality of tumblers is six and more. Support is found in Figures 2A and 2B, which illustrate a lock with 6 pairs of drivers and tumblers, and at the last sentence of para. [0134] which states that the lock can have more or less than the number of drivers and tumblers as illustrated in Figures 2A and 2B.

New Claim 81 is the same as currently-amended claim 1, except that the entire last paragraph beginning “wherein when the plug” of claim 1, is replaced with “wherein when the plug is in the second rotated position and the change tool is inserted within the change tool slot, none of the plurality of change balls can be disposed in the second position within the plurality of retainer cavities”.

New claims 82 and 83 are identical in wording to currently amended claims 62 and 77, respectively.

Applicant believes that no new matter has been added by way of the amendments to the claims, and that no additional claim fees are due.

C. Rejection of Claims 1-4, 45-52, 60, 63-65, 77-80 under 35 USC 103(a) over Monahan (4,386,002) in view of EP 0918124.

1. The rejection:

With respect to remaining Claims 1-4, 45-54, 60-67, and 77-78, the final rejection of the office action dated December 12, 2007 stated “Monahan teaches a lock including a housing 30, a plug 34, springs 49, drivers 44, pins 45, plural keys regarded user keys of a set, a programming key and a master key with different (raised and lowered) contour edges received in the keyway passage 62, a change tool slot 52, a change tool 51, change members 47 moved by the change tool as seen in figure 14 after the plug is rotated. Monahan also teaches a shim defined by the topmost wafer 47 as seen in figure 12. With respect to paragraph “e)” of claim 6 [*now canceled*], for example, the lock of Monahan is capable of being reconfigured solely in response to a key, by removing the change tool such as in the figure 11 condition and then inserting a key, rotating the key, and allowing a change member 47 to fall within the retainer cavity. As seen in figure 17, the EP (124) reference teaches using a ball (e) as a change member with a retainer cavity (f). It would have been obvious to substitute a ball in place of, or in addition to, the plural change member discs 47 of Monahan, in view of the teaching of the EP (124) reference, the motivation being to prevent jamming between the topmost disc 47 in the retainer cavity and the shear line in the figures 13 and 14 position of Monahan.”

In response to the rejection, Applicant requested reconsideration of the rejection in view of amendments made in a response dated February 11, 2008, that the change tool “raises any of

the plurality of change balls disposed in its respective retainer cavity to a position...”. The Examiner’s Advisory Action maintained the rejection of the claims, noting that:

1) with respect to “any” and “all”, the independent claims do not positively set forth that a change ball is located in all retainer cavities, and

2) that the numerous change tools of the Monahan reference teach using a biasing surface to remove a member in whatever retainer cavities are to be chosen to receive a change member.

In a subsequent response after final, graciously considered by the Examiner, Applicant again requested consideration in view of further amendments made in a response dated March 18, 2008, that the change tool “raises all ~~any~~ of the plurality of change balls when disposed in their ~~its~~ respective retainer cavity cavities to a position...”. The Examiner’s subsequent Advisory Action again maintained the rejection of the claims, noting that:

“Even if all of the change balls were claimed as being raised by a change tool, it is submitted that this would entail an obvious matter of design choice in the rejection of the claims, as Monahan (as modified by the EP reference) teaches that the shims (change ball as modified by the EP reference) may be raised at a retainer cavity where chosen, as shown at the left side of fig. 6, fig. 13. It is submitted that all claimed structure is taught by the prior art references. It is also noted that the claims are not drawn to a method of use of a lock assembly and a change tool. With respect to the claiming of a linear edge on the change tool, it is submitted that the tool of Monahan is linear at least along portions thereof, and would be entirely linear when modified to raise all change balls, with the matter of design choice in the rejection.”

2. Reconsideration of Allowance of the Claims:

Applicant requests reconsideration and withdrawal of the rejection of the above claims, and allowance of newly added claims 79-83, in view of the further amendments made and the remarks that follow:

A. The rejection of the amended claims over Monahan in view of EP 214 fails to state a *prima facie* obviousness rejection, because the amended invention as claimed includes several features that are not disclosed or suggested in, or made obvious by, either reference or a combination thereof.

#1: Applicant's claimed change tools in claims 1 and 60 have a blade that intersects all of the plurality of retainer cavities when the change tool is inserted within the change tool slot, wherein the upper edge of the blade raises all of the plurality of change balls when they are disposed in their respective retainer cavity to a position where, upon subsequent rotation of the plug away from the second rotated position, all raised change balls are removed from the retainer cavity and isolated in the corresponding driver chamber.

None of the plurality of set blades illustrated, disclosed or suggested by Monahan provides a set blade that has the blade as claimed, that can raise all of the master pins out all of the retainer cavities, wherein all the master pins are removed from the retainer cavities and isolated in the corresponding driver chamber. Each set blade illustrated (e.g., in Figures 6, 7, 15, 16) or disclosed (see Charts 1 and 3) discloses a blade profile having all positions, but for one or two positions, that are "0" bitted. A "0" bitted position is one that can retain one or more master pins 47 within a blind hole 50 when the set blade 53 is positioned within the slot 52.

The EP reference discloses and suggests nothing about change slots and holding alleged change members within the alleged cavities with an alleged change tool.

#2 Applicant's claimed lock assemblies in claims 1, 60, and 81 have one separate change tool.

The lock of Monahan requires a corresponding plurality of set blades to operate the lock with a corresponding one of the plurality of user keys. The lock of Monahan with only one separate set blade could operate with one user key. Monahan states in the Summary at col 2 line 48, "the lock is rekeyed by inserting one of a large quantity of unique programming members [ed: set blades] in (the) slot, which ... renders the lock usable only by one unique change key in addition to the master key."

The EP reference discloses and suggests nothing about change slots or an alleged change tool.

#3 In Applicant's claimed lock assembly structure in claim 81, none of the plurality of change balls can be disposed in the second position within the plurality of

retainer cavities when the plug is in the second rotated position and the change tool is inserted within the change tool slot.

The lock of Monahan discloses only set blades that hold or permit most of the master pins within the blind holes when the set blade is positioned in the slot. The rejection provides no rationale by which a person of ordinary skill in the art would consider selecting just one set blade which would not hold any master pins within any of the blind holes when positioned in the slot.

Again, the EP reference discloses and suggests nothing about change slots and holding alleged change members within the alleged cavities with an alleged change tool.

B. The rejection of the claims over Monahan in view of EP 214 fails to state a *prima facie* obviousness because the rejection does not articulate findings of fact that support the rationale relied upon in the obviousness rejection.

In just one specific example, the rejection provides no facts or reasoned explanation to support an alleged finding of an “*obvious* matter of design choice”. The rationale to support the specific design choice is that it is “obvious”. But why is it obvious?

Not expressly disclosed by Monahan is an even larger number of other unique set blades which would be formed with decreasing numbers of “0” bitted positions. The Examiner alleges that it would have been an “obvious matter of design choice” to select a single one set blade from among this large number of undisclosed unique set blades, which has all “0” bitted positions and raises all of the master pins out of the retainer cavity when inserted into the slot. The Examiner’s characterization of this design choice as “obvious” is self-supporting. Rather, a proper obviousness rejection requires the Examiner bear the burden of presenting some rationale for why a person of ordinary skill would select such one unique set blade alleged in Monahan. There are perhaps hundreds of possible uniquely bitted set blades possible from Monahan, some disclosed and some not disclosed. What is the rationale for select only one such set blade, and in particular only one set blade that is not expressly disclosed or illustrated? The only rationale appears to be hindsight. Applicant believes that Applicant’s own disclosure provides the only rationale in the record for selecting an otherwise undisclosed set blade out of the teaching of Monahan that would have all of the limitations required in Applicant’s claims.

(ii) Claims 48 (dependent from claim 1) and claim 60 also provide that the blade portion of the change tool has a linear upper edge. None of the set blades of Monahan are illustrated with a linear upper edge that intersects all of the blind holes when the set blade is disposed in the slot, and all of the set blades in Monahan are shown with bitted portions to retain at least one, and typically a large number of, master pins within the several blind holes.

D. Rejection of Claims 61 and 62 under 35 USC 103(a) over Monahan (4,386,002) in view of EP 0918124, and further in view of additional teachings of EP 0918124.

Regarding remaining claims 61 and 62, and without acquiescing to the characterization of the Monahan and EP'124 references made in the prior rejection, Applicant requests reconsideration on the basis of the amendments to claims 1 and 60, and the limitations of new claim 81, and claims depending therefrom.

E. Rejection of Claims 53, 54, 66 and 67 under 35 USC 103(a) over Monahan (4,386,002) in view of EP 0918124, and further in view of additional teachings of Monahan and Smith.

The Examiner states “Monahan also teaches master shims defined by the topmost wafer 47 as seen in fig. 12. In fig. 94, Smith teaches a shim 583 of a first diameter and a retainer cavity 545 of a second, smaller diameter. It would have been obvious to use a larger diameter shim with a retainer cavity of Monahan, in view of the teaching of Smith, the motivation being to control how many change members may enter a change cavity, in reprogramming a lock.”

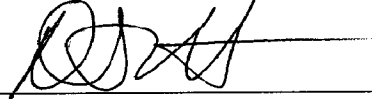
Without acquiescing to the characterization of the Monahan, EP'124 and Smith references made in the rejection, Applicant requests reconsideration on the basis of the amendments to claims 1 and 60, and the limitations of new claim 81, and claims depending therefrom.

Conclusion

Applicant believes a full and complete response to the Action has been made and that the amendments place all of the claims into condition of allowance

Respectfully submitted,

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